PREMININARY STAFF
SUMMARY OF INFORMATION

The ILLINOIS and MICHIGAN CANAL: Chicago Origins

A SITE LOCATED ON THE
SOUTH BRANCH OF THE
CHICAGO RIVER AT
ASHLAND AVENUE

SUBMITTED TO THE COMMISSION ON CHICAGO LANDMARKS
DECEMBER, 1989

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A site located on the South Branch of the Chicago River at Ashland Avenue.

Canal Construction: 1818 to 1848, 1865 to 1871

After the American Revolution, the focus of the new country's efforts in regard to internal improvements was on transportation. With the intent to provide greater access to resources and markets across what were then considered great distances, means were sought to expedite the movement of goods and people. The model that the builders of the new republic chose to emulate was the system of canals that had been built in Europe, particularly in the Netherlands and France. Canals were seen as an extension and expansion of the existing transportation network in which the rivers functioned as "natural highways" along which commerce could flow. The presence of a strategically placed canal was seen as a guarantee of economic expansion through new access to raw materials, the establishment of local industries, and the transfer and shipment of people and products. The impetus toward canal development was a factor in determining government policies toward Native American tribes, had influence in the positioning of boundaries between Midwestern states, and decided the location of what have become some of the largest cities in the nation. Although the railroad would replace many of these waterways during the second half of the nineteenth century, they were largely successful in their intended purpose to encourage the settlement and development of the interior of the United States. The Illinois and Michigan Canal, connecting the Illinois River with Lake Michigan through the Chicago River, opened in 1848 and was essential to the growth of Chicago, northern Illinois, and the upper Midwest. The western-most of the major canals built in the Northern states before 1850, it served to complete the system of navigable inland waterways that stretched from New York City and Buffalo to Saint Louis and New Orleans. It was also the first of a series of transportation facilities that established Chicago as the hub of the passenger and freight network in the central United States.

The Chicago Portage

The natural divide that defines the boundary between the Mississippi River and Great Lakes drainage basins is, for most of its length, at an elevation of 150 or more feet above

the water level of the lakes. However, its lowest point, at only 13 to 15 feet above the mean water level of Lake Michigan, occurs in the area between the South Branch of the Chicago River and the Des Plaines River, in what is now the southwestern area of the City of Chicago. The land between these rivers was a slough that flooded during periods of high water in the spring and fall, making canoe traffic from one river to the other occasionally possible. This unique place in the geographic relationship between the lakes and the river system was used for centuries as a convenient trade route. Native Americans, travelling by canoe, used the rivers and lakes as their primary means of trade and transportation, and had by necessity located the places such as the Des Plaines and Chicago site, that afforded the shortest overland communication between the two water systems. These portages, where goods and canoes were carried from one river to another, were a particular subject of interest to the French who were the first Europeans to explore and trade in the Great Lakes area.

The purpose of the expedition led by explorer Louis Jolliet and Jesuit missionary priest Father Pierre Marquette in 1673 was to determine if the Great River of the north, as the natives called it, was the same river that had been found to flow into the Gulf of Mexico. Travelling south from Michilimackinac, they entered Green Bay, travelled up the Fox River, portaged to the Wisconsin River and continued on to the Mississippi. Paddling south, they passed the Illinois, Missouri, and Ohio rivers before reaching the Arkansas River. At this point, they determined that the river they were on was indeed the Mississippi, and they returned north, this time exploring the Illinois River, discovering an Indian village at Kaskaskia, and gaining escorts who led them to the portage to Lake Michigan.

Although Jolliet lost the maps and report made during this expedition in a near-fatal canoeing accident before reaching his superiors in Montreal, Marquette's map, which clearly indicated the "Portages de Chekagou," made the location famous. Marquette was quoted as having told the Jesuit Father Claude Dablon:

> The fourth remark concerns a very great and important advantage which will hardly be believed. It is that we could go with ease to Florida in a bark and by very easy navigation. It would be necessary to make a canal, by cutting through but half a league [1½ miles] of prairie, to pass from the foot of the lake of the Illinois [Lake Michigan] to the St. Louis River [the Des Plaines and Illinois rivers]. (Andreas, *History of Chicago*, 1884).

During the 1700s, Native Americans continued to trade and travel through the Chicago portage; however, French and English traders preferred a route explored by Robert Cavalier de LaSalle in 1679, from Detroit through the Maumee River at the site of Toledo, Ohio, south to the Wabash River and on to the Ohio River. A canal had also been proposed for the portage between the Maumee and the Wabash, which led to speculation that a great city would rise at the northern end. As late as the 1830s, the newly formed state of Michigan was so certain that Toledo would be the site of the metropolis of the interior that it tried to wrest control of the area from Ohio by an appeal to Congress and the threat of occupation by its state militia. The result of this incident, known as the "Toledo

War," was a federal settlement that preserved the established boundaries between Ohio and Michigan, but gained for the latter the area known as the Upper Peninsula in compensation. The territory of Wisconsin, for which this area had been intended, was not yet admitted as a state and had no recourse but to accede to the new boundaries.

The Treaty of Greenville, signed in 1795 among the British, Americans, and the local native tribes, secured the Northwest Territories for the United States. One of the provisions of the treaty specified that an area of six square miles at the southwestern end of Lake Michigan be reserved for the federal government. It was on this land that Fort Dearborn was constructed in 1803, marking the first acknowledgement of the importance of the Chicago portage to the national interest. In the same year, President Thomas Jefferson concluded the Louisiana Purchase which gave the United States control of the entire Missouri and Mississippi River basins. The potential inherent in the purchase for a waterborne inland transportation network was first advanced as an issue for federal attention by Congressman Peter B. Porter, a New Yorker and advocate of the Erie Canal, who was the first to revive the notion of a canal through the Chicago portage in 1810. During the course of the War of 1812, with the loss of Fort Mackinac in Michigan and the destruction of Fort Dearborn by Potawatomies allied with the British, the value of an inland waterway system for military purposes became clear. To this end, President James Madison recommended in an address before Congress in 1814 that a canal be built to connect the Great Lakes with the Mississippi through the Chicago Portage. With the end of the war in 1815, negotiations began with the Potawatomi, Sac, and Fox tribes for the rights to the portage, and in the following year, the federal government concluded a treaty by which the tribes ceded the proposed canal route and the land for ten miles on either side of it. Additionally, the federal government re-established its authority in the area with a ceremonial ground-breaking for the second Fort Dearborn on the Fourth of July, 1816.

The Indian Cession Treaty of 1816, which defined the corridor for the future canal development, became an important issue when the question of statehood for Illinois was addressed in 1818. Congress had intended that the old Northwest Territories would be divided into five states: three south of a line that was drawn from the westernmost point of Lake Erie (Ohio, Indiana, and Illinois), and two to be created north of this line (Michigan and Wisconsin). Had this line, as established by the existing borders of Ohio and Indiana, been extended, what is now 79th Street on the South Side of Chicago would have been the northern boundary of Illinois. Noting that the plans for a canal to connect the Maumee and Wabash Rivers had been hampered by wrangling over costs and schedules by the administrations of Ohio and Indiana, the federal government determined that the cause of a canal at the Chicago Portage demanded that it be administered by a single state. The decision was made, therefore, to extend the northern boundary of Illinois to include the mouth of the Chicago River, the entire area ceded in the Treaty of 1816, and the land that now comprises Lake County and the northern tier of counties in Illinois. As in the case of the "Toledo War," the future state of Wisconsin was the territorial loser in a battle for control over canal construction and commerce.

Planning the Canal

Although federal assistance had been given and would be made available again, the state of Illinois was to be responsible for the construction and operation of the proposed canal. In 1822, Illinois lobbied successfully to have the Congress deed the canal bed and ninety feet of land on each side of it to the state. The first Canal Commission was created the next year, and engineer Justus Post and map maker Rene Paul were hired to survey the area defined by the Treaty of 1816. In their 1824 report to the Commission, Post and Paul defined five possible routes for the canal, with detailed descriptions of the topography, a map, and estimates of the cost of construction. The first Commission was dissolved in 1825, and the next year the state legislature attempted to establish a private joint stock company to built the canal. When it became clear that the new state did not have the financial resources to sufficiently fund construction of the canal by either public or private means, the legislature dissolved this corporation and petitioned Congress for a land grant. Federal surveyors, operating from Fort Dearborn, had already laid out a survey grid within the territory of the cession. The Congress responded by granting the state a quarter of the land in the canal corridor, consisting of all of the odd-numbered, 640-acre sections within five miles of the canal bed. This grant was made for the exclusive purpose of financing the proposed canal through the receipts of land sales.

With the Congressional land grant in place, the state created a new Canal Commission in 1829 which was intended to establish the route, begin the sale of canal lands, and to lay out a town at each end. Sales of land went too slowly to allow for the beginning of construction; however, the towns of Ottawa and Chicago were laid out in 1830, and further surveys toward the end of finalizing the route were undertaken. In despair over the estimated cost of the project, the Commission then proposed abandonment of the canal entirely in favor of a railroad along the same route. The Canal Commission was dissolved again, and no action on either a canal or a railroad was taken for two years. By 1835, however, the population in the corridor was increasing and speculation had driven the price of land up appreciably. The state could not fail to note that the primary reason for new commercial activity and settlement in its northern territory was the Erie Canal in New York State. Opened in 1825, it had shifted the migration route of new settlers away from the Ohio River and Cumberland Gap to the Great Lakes. Increasing use of steam-powered ships would only continue to enhance the importance of Great Lakes shipping, decreasing travel times, and making larger vessels and cargos possible.

On January 9, 1836, the state legislature passed an act to create a Board of Commissioners to coordinate the funding, construction, and operation of a canal to connect the Illinois River with Lake Michigan (Figure 1). The Commission set about organizing the sale of canal lands and building the Canal Road, a plank road that was to serve as the primary means of supplying the project. This road, which came to be known as Archer Road after Colonel William B. Archer, a member of the Board of Commissioners of the Illinois and Michigan Canal, was complete and open from Chicago to Joliet, a distance of 36½ miles, by the middle of December, 1836. The town of Chicago had celebrated the beginning of work on the canal with a Fourth of July celebration and ground-breaking, held at

the site of the northern end of the canal. Boats filled with celebrants sailed from the town down the South Branch of the Chicago River to hear the Declaration of Independence read by Illinois Supreme Court Justice Smith, addresses by Colonel Archer and other prominent citizens, and to witness Archer, his fellow Commissioner Colonel Gurdon S. Hubbard, Justice Smith, and Justice Brown successively break ground for the new canal. The *Chicago American* reported that the event occurred at "Canal Port," a name that had been proposed for the settlement planned for the neighboring area.

The route that was finally selected for the Illinois and Michigan Canal located its northern end at the confluence of the South Branch of the Chicago River with its South Fork, a small body of water that would later become known by its infamous nickname, "Bubbly Creek." The choice of this site, as opposed to a location that would have connected the canal with the South Branch a mile to the southwest, was determined by the slough at the more westerly site. It was there that the spring and fall floods occasionally made direct communication between the Des Plaines and Chicago rivers possible, but for most of the year it was a stagnant quagmire, impassible by canoe or on foot. The ill-defined boundaries between solid ground and a body of water at this point would have required not only the digging of a canal channel but also the construction of landfill for supporting facilities. The site at the confluence, however, required only that the canal channel be dug through a clearly defined land mass. All of the necessary support facilities could be put in place immediately, saving time and, particularly, labor costs. This site, located at the intersection of the South Branch of the Chicago River with Ashland Avenue, is the Chicago origin of the Illinois and Michigan Canal.

Constructing the Canal

To expediate construction along the entire line, the Canal Commissioners created three administrative divisions based on geographic considerations. The Summit Division included the section that stretched from the Chicago River through the natural divide, or summit, that separated the two drainage basins and extended along the Des Plaines as far as Lockport, Illinois. For construction purposes, the Division was subdivided into sections that averaged sixty chains (3,960 feet) in length. The required minimum depth for the canal was six feet, and it was to be no less than sixty feet wide at any point. Ninety feet on each side of the canal, as specified in the 1822 Congressional grant, was reserved for canal uses, including towpaths and supporting facilities.

When the first contracts in the Summit Division were offered in May, 1837, the shortage of available labor in the area casued few bids to be tendered. As a result, contracts were awarded for only the first three sections south and west of the confluence during the first year. The contract for the first section, which went into effect on March 8, 1838, named Madore B. Beaubien as the contractor. Madore was a son of Jean Baptiste Beaubien and his Potawatomi wife, early pioneers who settled in Chicago in about 1824. Jean Baptiste operated a fur trading outpost of John Jacob Astor's American Fur Company, and Jean's brother, Mark Beaubien, owned the Sauganash Hotel, one of Chicago's first and most famous public gathering places.

Madore Beaubien was born in Grosse Pointe, Michigan, near Detroit. He received his first education at the McCoy Indian School and later attended Hamilton College in Clinton, New York. After rejoining his family in Chicago, he was elected to the newly incorporated town's first Board of Trustees in 1833. However, during the course of the 1830s, the influx of new people and money from the East drove the original settlers from positions of authority and prominence in the community. Madore, like many of his mixed-blood relatives, found that due to growing intolerance toward Native Americans, he was no longer welcome in the town he had helped establish. He lost his seat on the Board in 1835 and was torn by having to chose between living in an Eastern-dominated Chicago or joining the Potawatomi on their migration west. The Treaty of 1833 between the federal government and the united Chippewas, Ottawas, and Potawatomies gave the tribes a cash settlement and lands in Missouri and Kansas in exchange for abandoning all title to their land in Illinois. In the early 1840s, Madore would leave Chicago to follow his Potawatomi kin west of the Mississippi. He died on a reservation in Silver Lake, Kansas, in 1883 or 1884.

Beaubien's contract for the first section of the Illinois and Michigan Canal, including the opening of the canal at the confluence, specified that 71,016 cubic yards of earth were to be moved at a total estimated contract worth $27,277.66. According to the Governor's report to the State Legislature, $14,289.47 of the contracted work in this section had been completed and paid for as of December 31, 1838. The work had proceeded quickly, particularly in light of the scale of the project. Although Beaubien's section was shorter than most of the other sections by three chains (258 feet), the amount of material he had contracted to move was nearly three times that of the neighboring sections to the southwest: the second section, although sixty chains in length, called for the excavation of only 24,420 cubic yards of earth, and the contract for the third section was comparable to the second. The explanation for the discrepancy in the scale of these operations is likely to have been the inclusion of a supply channel in the first section. This secondary channel, or flume, was deemed necessary for the maintenance of an adequate water level in the canal. The position of the supply channel relative to the main canal and the first lock was clearly indicated on a map of the plat for the new town of Canal Port that was drawn in about 1845 (Figure 2).

Work on the canal continued until early in 1842, when the cumulative effects of too many attempted internal improvement projects, insufficient funding, and the badly over-budget canal conspired to put the state into receivership. Improving economic conditions, concessions to creditors, changes in design, and a new Board of Trustees were necessary before work could again commence. The original design for the canal was called the "deep-cut" plan in which a carefully measured, gentle downhill grade would be established from the origin of the canal at the confluence through the natural drainage divide at the summit, and on to the Illinois River, which would, by the natural force of gravity, reverse the flow of the Chicago River and thereby maintain the water level of the canal. Although provisions for feeder canals were made along the line, it was hoped that water from Lake Michigan would be drawn in great enough quantities through the two channels at the confluence to adequately supply the needs of canal traffic. All of these plans had

to be changed after the state suffered its financial reversals, and it was determined that the canal could be made adequately operational by being completed on a "shallow-cut" plan. A larger number of locks, greater feeder canal capacity, and a hydraulic pumping station at the confluence would be necessary to make up for the amount of water that would not now flow naturally from the lake. With this plan in hand, the new Board of Trustees managed to borrow sufficient capital from the East and from overseas, particularly from England, to allow construction to continue in 1845.

During the second phase of canal construction, the hydraulics plant was considered essential to the future success of the canal. It was built adjacent to the supply channel, between the channel and the main branch of the canal, just east of Ashland Avenue at the confluence. The building that housed the works was designed by Chicago's first professional architect, John Murray Van Osdel, and the hydraulics were designed by the Chief Engineer of the Illinois and Michigan Canal, William Gooding.

John Murray Van Osdel was born in Baltimore where he received his early education before moving to New York City with his parents. He worked there with his father, John Van Osdel, who was a builder and architect. The son, John M., moved to Chicago in the late 1830s under the assumption that the frontier town would need an experienced architect, and he made a lucrative career designing the most prominent buildings in pre-fire Chicago, including the Ogden House, Rush Medical College, the Second Presbyterian Church, and the Cook County Courthouse of 1853. He also designed the first (1869-71) and the second (1873-74) Palmer House Hotels. In addition to architecture, he was responsible for the design of the first steamboats built in Chicago, the *James Allen* and the *George W. Dole*.

Van Osdel's partner in designing the steam-driven engines for the boats may well have been the Chief Engineer of the Illinois and Michigan Canal, William Gooding. Gooding, who had experience in canal and hydraulic design in New York State, was hired by the Canal Commissioners in 1836 and remained affiliated with the canal until he died in 1878. Gooding's expertise in the area of hydraulic design was known and respected enough that he was called to testify to a Congressional committee in 1839 on the subject of the proper design, maintenance, and safe operation of steam-driven engines, particularly in regard to steamboats.

The building that Van Osdel designed to house Gooding's steam-driven hydraulic pumps was a two-story brick building on a stone foundation, with segmentally arched basement-level intake vents, square-headed door and window frames, and a hip roof (Figures 3 and 4). This facility, which was made necessary by the decision to complete the canal on the shallow-cut plan, was completed at a cost of $29,000 in 1848.

The canal, its towpaths and aqueducts, locks, hydraulic plant, and the bridges that were necessary to carry the towpaths uninterrupted over the feeder canals and other obstacles, was ready for use with the spring thaw in 1848. In a letter dated April 24, 1848, Gooding reported to the Board of Trustees that the Illinois and Michigan Canal was open

along its entire length. The first boat to make a round trip from Lockport to Chicago was the *General Fry*, which made the trip on the first and second of April and again on April 10 through 12, and the first to make the full ninety-six mile trip from LaSalle to Chicago was the *General Thornton* which arrived on April 23 bearing a cargo of sugar from New Orleans bound for Buffalo, New York. Inland waterborne commerce could now move from New York and the East Coast through the Great Lakes and Chicago as far north as Minnesota, as far south as the Gulf, and west as far as Kansas and Nebraska.

An intermodal transfer point was set up at the origin of the canal. Passengers and goods arriving by ship from Lake Michigan, by canal boat from the interior, and overland by the Archer Avenue plank road congregated here, were transferred, and moved on. Access between Archer and this landing was opened through the newly platted town near the mouth of the canal via a bridge over the river. Constructed in about 1848 as an extension of what is now known as Fuller Street, its importance to local commerce was reflected in the name the community adopted and which it proudly retains: Bridgeport.

Although passenger boats outnumbered freight boats on the canal in its first years, industrial development followed rapidly in the wake of the canal's opening. Lumber, shipped from the upper Great Lakes, was milled in Chicago before being sent inland as building material for new construction on the frontier. Livestock and grain were shipped to markets, slaughterhouses, and elevators at Chicago, the other Great Lakes cities, and as far as New York. Virtually overnight the canal transformed Chicago and Bridgeport into boomtowns. Within five years, the activity generated by the Illinois and Michigan Canal caused six new rail lines to be completed into or through the city, supporting the establishment of such local institutions as the Board of Trade. In turn, these events increased the flow of goods and people on the canal, expanded rail service, and made necessary the construction of large scale public works, in particular water and sewer systems and raising of the street grades, to accommodate a population that was growing exponentially.

Deepening the Canal

The flat contours of the land and the presence of large amounts of clay immediately beneath its surface had caused drainage problems from Chicago's first recorded settlement. Early efforts to keep the streets dry consisted mainly of the digging of ditches along major streets which would empty into the river. Unfortunately, when the level of the river was high, water would back-up along these channels and flood the town. Plank roads failed to solve the problems for traffic because moisture rotted the wood, allowing horses and carriages to break through and fail into a quagmire.

As the population grew these problems only became more pronounced. From 1837, when the City had been incorporated with a population of under 5,000 people, it had expanded to nearly 25,000 at the opening of the canal in 1848 and had reached 299,000 in 1870. The first attempt to construct sewers was a very limited experiment using wooden pipes which emptied into the river. Again high water was a problem, and the water in

Lake Michigan was becoming polluted. The intake for the city water system was only a few blocks north of the mouth of the river, and pollution at this source contributed to outbreaks of cholera and dysentery that claimed some 1,600 lives in the summer of 1854. In February, 1855, the state legislature created the Board of Sewerage Commissioners to solve the problem of the City's waste water. The results of the work of this Board, under the designs of its chief engineer, Ellis S. Chesbrough, was a new comprehensive network of sewers and a deeper river by dredging its South Branch. In order for the sewers to have a grade and outlets above the waterline of the river, they could not be laid under the existing streets. Sewers were built of brick on the existing right-of-way, and were covered with landfill that was packed down to form new roadbeds, effectively lifting the town out of the mud.

Although the problems of waste water and drainage for roads had been solved, this process condemned the river to become an open sewer. As pollution collected in the river, the intake for the fresh water system had to be repeatedly moved further out into the increasingly foul lake. By 1858, it was recognized that one way to reduce this effect was to use the hydraulic pumping works for the canal, which drew water from the South Branch of the river, as a means of disposing of some of the waste water. It became clear that, in order to preserve the fresh water supply of Lake Michigan, completing the original deep-cut plan for the canal was necessary. The canal would then draw water from the lake through the river, cleansing the river with a continual flow of lake water.

Because river pollution was considered the City's problem, an act of the legislature in February, 1865, authorized the completion of the deep-cut plan under the joint supervision of the City's Board of Public Works and the Canal Trustees. Work began the following November and was completed with the removal of the lock at Bridgeport on July 15, 1871. A celebration was held to commemorate this event, the reopening of the waterway to commerce, and the success of its new status as one the engineering wonders of the world, the river that had been made to run backwards (Figure 5). Confidence in the ability of the deep-cut to maintain a constant water level was so high that the Canal Commissioners decided to abandon the hydraulic works in 1873. The machinery was apparently sold for scrap, and the building was sold to the Chicago, Danville & Vincennes Railroad for $2,500, to serve as a grain elevator. Although altered and given at least two additions, this building would continue to serve as an elevator until at least 1901.

Beginning in 1874, and throughout the 1870s, the water level in the lake, river, and canal was at a historic low point. The flow of water, which was usually moving away from the lake, could change direction with a heavy rainfall, endangering the water supply and the health of the city. Although a low water level could complicate the movement of commerce along the canal, it particularly exacerbated the problem of diluting large amounts of water-borne raw sewage. In 1882, it was determined that a new pumping works would have to be built and that the canal would need a new lock at Bridgeport to limit the reversal of water flow toward the lake. The report of the Canal Commissioners for 1882 stated that the erection of the new lock and pumping works was not necessary for navigation on the canal but "had become actually necessary for the health of the City

of Chicago." The new pumping works were built near the confluence, on the same supply channel that had been served by the original hydraulic station but on the west side of Ashland Avenue (Figure 6). The new lock was also placed west of the original lock and west of Ashland in the main channel.

Starting in 1870, steam-powered tugboats had been replacing horses and mules on towpaths as the means of canal boat propulsion. As the state had less need to use the ninety-foot strips of land on both sides of the canal granted to it by the federal government to service canal operations, the land was made available for lease to railroads and businesses. This generated income for the state and created a very dense corridor of industrial and transportation facilities. Increased rail access and motorized canal traffic meant larger cargos, reflecting the growth of local industry. The canal carried more than one million tons of goods, its record, in 1882. The expansion of such industries as brick kilns, stone quarries, steel foundaries, and glass works built on the earlier base of lumber, grain, and livestock commerce.

Supplanting the Canal: the Sanitary and Ship Canal, the Illinois Waterway, and the Stevenson Expressway

The inadequacy of the Illinois and Michigan Canal in diluting city sewage and its incapacity to carry larger ships was well recognized by the middle of the 1880s. Competition from the railroads had caused canal profits to decline in the late 1870s, and the state's new Constitution of 1870 forbade the expenditure of state funds on the Illinois and Michigan Canal. These events caused its decline and began the debate over the question of enlarging the existing canal or constucting a new canal. These problems were addressed in 1889, when the Metropolitan Sanitary District of Chicago, presently known as the Metropolitan Water Reclamation District of Greater Chicago, was founded for the purpose of constructing a new canal. The size of this body of water, 160 feet wide at its most narrow point, with a depth of 25 feet, was intended to provide a volume of Lake Michigan water that would be enough to dilute the city's sewage and move it away from the fresh water of the lake. Begun in 1890 and opened from the South Branch of the Chicago River at Damen Avenue to Lockport on January 2, 1900, the Sanitary and Ship Canal was a marvel of modern engineering, having a bottom that was 24 feet below the mean water level of Lake Michigan. The cubic volume of material that was moved from this project was so great that new earth moving machines, such as the steam shovel, had to be invented during the canal's construction. These technological innovations proved to be important for the construction of the Panama Canal a decade and a half later.

Shipping on the Sanitary and Ship Canal started in 1906 when the Calumet-Sag Canal was completed, connecting the Calumet River with the inland waterways. The Cal-Sag Canal cut through the Illinois and Michigan Canal at Lemont, rendering the older canal useless for shipping. From 1912, traffic on the Illinois and Michigan Canal was limited to the run between Lockport and LaSalle. The site of the origin of the canal at the confluence of the South Branch and the South Fork was leased to the Atchison, Topeka and

Santa Fe Railroad whose tracks had already occupied the former towpath within the city limits. The main channel of the Illinois and Michigan Canal, as well as the supply channel and the 1882 pumping works, were still in place when all operations north of Lockport ceased in 1912.

The Sanitary and Ship Canal, with its capacity to handle deep water ships, reinforced the industrial character of the corridor through which it flowed. By the 1920s, the need to connect this waterway with the Mississippi River was recognized, and a project to dredge and straighten the Illinois River was begun by the state. Once again, this time due to the Depression, Illinois was in the position of being unable to complete the improvement of its waterways. In 1930, the federal government took over the project and completed it in 1933. Known as the Illinois Waterway, this new channel put an end to the remaining operations on the Illinois and Michigan Canal.

In Chicago, the Illinois Waterway project had its greatest physical impact at the site of the origin of the Illinois and Michigan Canal. Due to the position of the South Branch and the South Fork, this site was found to be the best location for a new turning Basin for larger ships. Excavation for the turning basin removed the opening of the canal, including the site of the original lock (Figure 7). The remaining portions of the canal and the supply channel remained intact until they were filled in on the west side of Ashland Avenue by the Santa Fe and Illinois Central railroads to expand the operations of their produce terminal, sometime between 1933 and 1950. By 1951, all of the Illinois and Michigan Canal from Ashland Avenue west to Pulaski Road had been filled in for increased railroad access.

In 1956, the state conducted a study of the route of the Illinois and Michigan Canal in Chicago to identify its assets, who had leases on them, and to determine for what they were being used. As early as 1901, a proposal had been made that the canal be filled and paved for a highway, and the proposal had been made again in 1930 by Cook County Commissioner Anton Cermak, who envisioned a parkway built below grade that would relieve traffic congestion resulting from the Century of Progress World's Fair, planned for the lakefront in 1933. The concept of a highway was advanced in 1947, when the state reached an agreement with the federal government to amend the original 1822 grant, eliminating the restriction that the adjacent lands be used solely for the construction and maintenance of a canal. State-held lands were vacated along most of the route in the city, and construction of the superhighway known as the Adlai E. Stevenson Expressway/Interstate 55 was begun in 1957. The high cost of land in Chicago made the choice of the Illinois and Michigan Canal right-of-way attractive, and the roadway was built over the filled-in canal from a point just east of Leavitt Street to another just beyond the city limits, a few blocks west of Harlem Avenue in Summit, Illinois. Currently, the northernmost surviving section of the Illinois and Michigan Canal is about two miles south of the point where the Stevenson Expressway leaves the canal right-of-way, near the boundary between the towns of Argo and Justice.

After the expressway was completed, the right-of-way between Leavitt Street and Ashland Avenue remained under lease to the Santa Fe and Illinois Central railroads. Although a few lines of track still run along the right-of-way, most have since been removed, and the site is now paved for truck trailers and the Illinois Central Railroad rail-to-truck transfer facility, known as a "piggy-back depot." Ashland Avenue, which has been improved to a four-lane road at its junction with the South Branch, defines the eastern end of these facilities. On the west side of Ashland, on part of the first section excavated by Beaubien, stands a massive interstate freight transfer and warehouse facility, built approximately twenty years ago by the Sears, Roebuck Company. Although the technology has changed from the horse-drawn canal boat to the steam-driven tug, and from the steam locomotive to the diesel-powered tractor-trailer, the site has remained in use for the transfer and shipment of goods since the Illinois and Michigan Canal opened in April, 1848, providing eloquent testimony to the strategic importance of the location within the regional transportation network.

East of Ashland Avenue, the site that had been occupied by the original hydraulic works of 1848, the point where the bridge had connected the origin of the canal to Bridgeport, and the site of the first lock and freight transfer, is now vacant land. Reduced to less than half of its earlier size by the encroachments of Ashland Avenue expansion and the digging of the turning basin, it nonetheless retains the last short segment of the canal to survive in the city, the intake of the hydraulic supply channel. Although this section is no more than a few yards long, it does include, at the water level on its south side, a stone arch that may have been part of the intake system for the hydraulics. Although located closer to the site of the first works, the fact that it is made of a stone darker and more dense than Joliet limestone, the common early building material used along the canal, may indicate that this is a fragment from the second pumping works built in 1882 and 1883. The derelict character of this site stands in sharp contrast to that of the parcel across the street to the west (Figure 8).

Revitalizing the Illinois and Michigan Canal

Beginning in 1933, with Governor Henry Horner's request to the Department of the Interior to have the Civilian Conservation Corps work along the Illinois and Michigan Canal, the abandoned waterway outside of Chicago has been used as the focus of recreational facilities. Buildings and locks were restored, trails mapped out, and documents related to the canal were inventoried. The former Canal Headquarters Building became the Will County Historical Society, and in 1938, the state's Division of Public Works and Buildings leased 1800 acres of Illinois and Michigan Canal land, nearly half the total, to the Division of Parks. The Congressional act of 1947 that allowed the state to develop the Stevenson Expressway along the canal right-of-way also allowed for the development of recreational facilities. In 1972, the state turned over all of the remaining canal lands to its Department of Conservation in response to the action of citizens and the Open Lands Project organization. The result of this effort was the Illinois and Michigan Canal State Trail which stretches from Joliet to LaSalle.

By 1980, the success of the recreational program and the concurrent economic downturn suffered by many industries along the canal corridor generated civic action for federal support that would encourage redevelopment of the area. A comprehensive plan to integrate commercial, industrial, recreational, and historic elements into a tool for revitalization along the canal route was presented to Congress, and a bill was passed in 1984 to create the Illinois and Michigan Canal National Heritage Corridor and Commission. The corridor includes the right-of-way of the canal along the Stevenson Expressway. The most appropriate location within the City of Chicago for historical interpretation and recreational activities associated with the canal may be the site of its origin at the confluence of the South Branch and South Fork (Figure 9).

In every sense, Chicago owes its existence to the portage and to the canal cut through it to connect the Mississippi and Great Lakes waterways. Although in part an abandoned site today, the origin of the Illinois and Michigan Canal was the starting point for the agricultural and industrial development of the city and the region, opening new territories to grow in a manner and at a pace that would otherwise have been impossible. The activity the canal generated was the first impetus that vaulted Chicago from a large town of 25,000 when it opened in 1848, to the second largest city in the country, a metropolis of 1.7 million, only fifty years later. The Illinois and Michigan Canal established Chicago as a center of the national transportation network, a position the city continues to hold through such facilities as the Sanitary and Ship Canal, Conrail and Amtrak hubs, trucking depots, and O'Hare and Midway airports. This legacy is one of the most important and distinguishing features of the commercial, industrial, and economic life of Chicago.

Figure 1: The Illinois and Michigan Canal Corridor, 1816 to ca. 1880. The area within the dotted lines was the territory specified in the Cession Treaty of 1816.

(Reproduced from *The Illinois and Michigan Canal National Heritage Corridor*, Michael P. Conzen and Kay J. Carr, eds.)

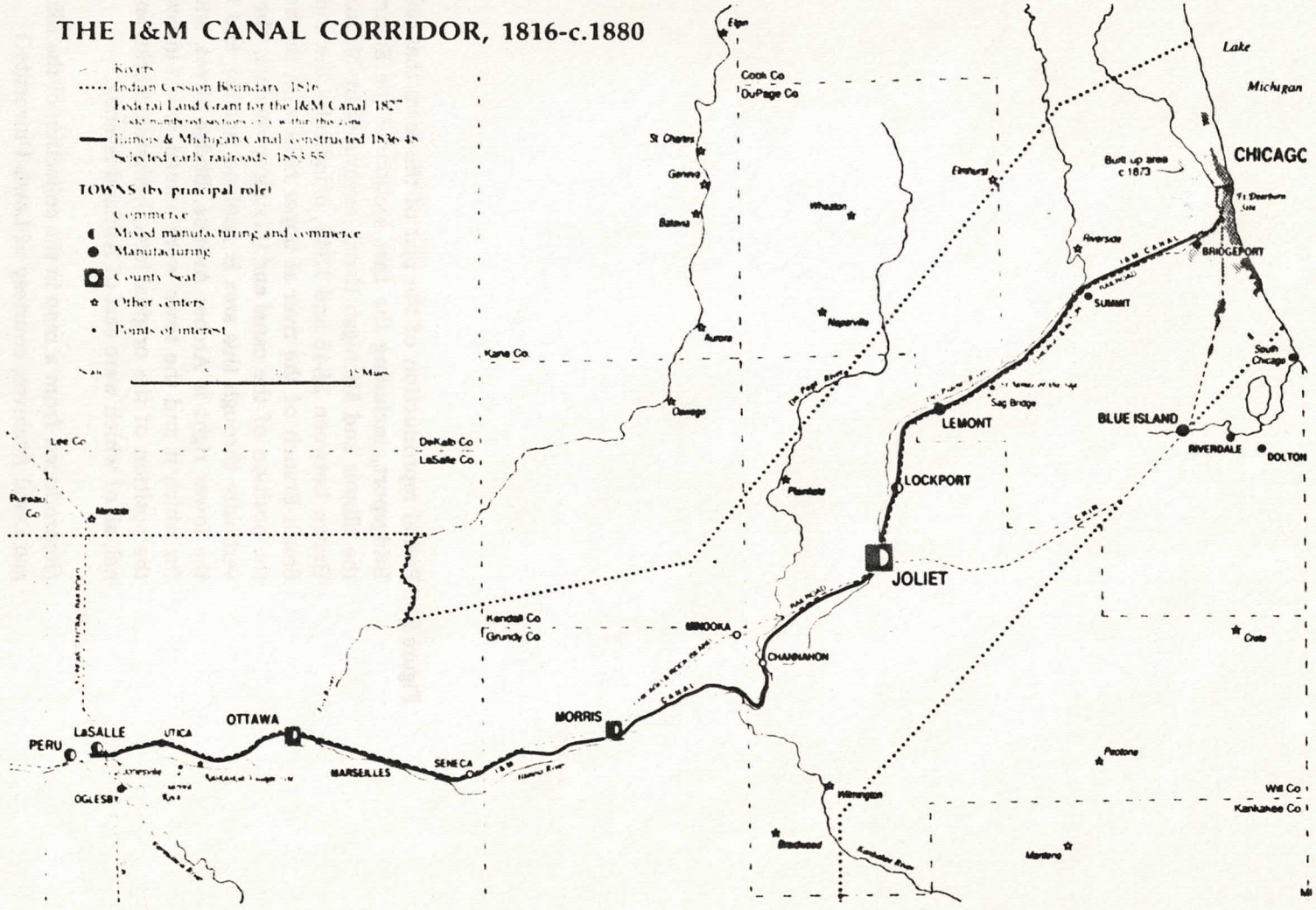

THE I&M CANAL CORRIDOR, 1816-c.1880
Rivers
Indian Cession Boundary 1816
Federal Land Grant for the I&M Canal 1827
Illinois & Michigan Canal constructed 1836-48
Selected early railroads 1853-55
TOWNS (by principal role)
Commerce
Mixed manufacturing and commerce
Manufacturing
County Seat
Other centers
Points of interest
Scale
15 Miles
Lake
Michigan
CHICAGO
Built up area c.1873
BRIDGEPORT
SUMMIT
LEMONT
Sag Bridge
BLUE ISLAND
RIVERDALE
DOLTON
South Chicago
LOCKPORT
JOLIET
MINOOKA
CHANNAHON
MORRIS
OTTAWA
LaSALLE
UTICA
PERU
MARSEILLES
SENECA
OGLESBY
Elgin
Cook Co
DuPage Co
St Charles
Geneva
Batavia
Aurora
Oswego
Naperville
Wheaton
Elmhurst
Riverside
Kane Co
DeKalb Co
LaSalle Co
Lee Co
Bureau Co
Princeton
Kendall Co
Grundy Co
Crete
Peotone
Wilmington
Will Co
Kankakee Co
Braidwood
Manteno

Figure 2: Partial reproduction of the plat of the town that came to be called Bridgeport, including the first section of the Summit Division of the Illinois and Michigan Canal, excavated by Madore B. Beaubien. Drawn between 1845 and 1848, it indicates the confluence of the South Branch of the river at upper right with the South Fork, and the position of the canal and its supply channel. The road that runs vertically through this area is Ashland Avenue, and the diagonal at the lower right is Archer Avenue. Bridge Street, and the structure for which it and the town were named, is not indicated here. Note the position of the original lock, hydraulic works, and supply channel, all of which were east of Ashland Avenue.

(Reproduced from a map in the collection of the Illinois and Michigan Canal Archives, courtesy of Lewis University.)

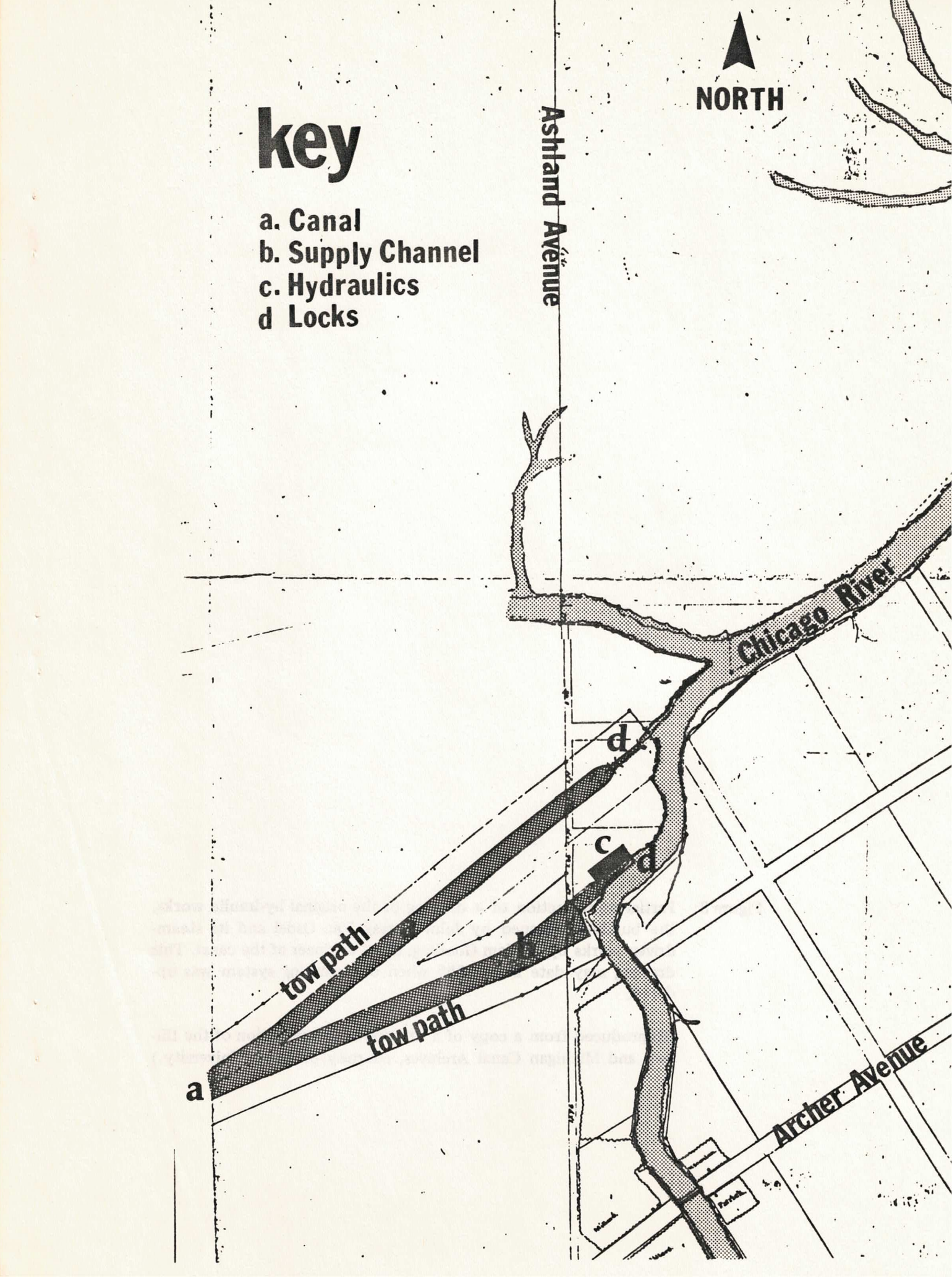
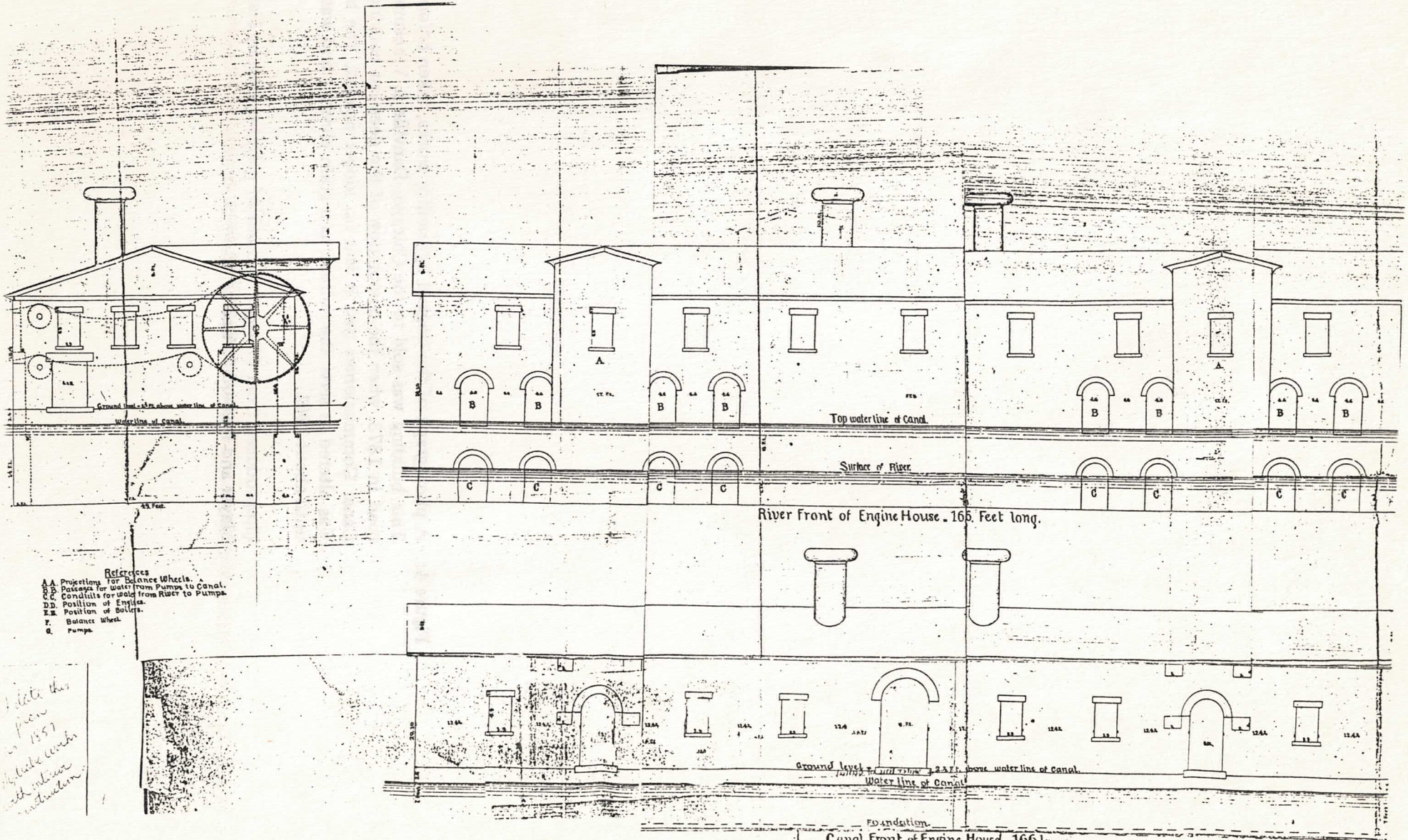

key
a. Canal
b. Supply Channel
c. Hydraulics
d Locks
NORTH
Ashland Avenue
Chicago River
d
c
d
b
a
tow path
tow path
Archer Avenue

Figure 3: Partial reproduction of a drawing of the original hydraulic works, the building designed by John Murray Van Osdel and its steam-driven works by William Gooding, Chief Engineer of the canal. This drawing may date from 1857 when the pumping system was updated.

(Reproduced from a copy of a drawing in the collection of the Illinois and Michigan Canal Archives, courtesy of Lewis University.)


References
A A. Projections for Balance Wheels.
B B. Passages for water from Pumps to Canal.
C C. Conduits for water from River to Pumps.
D D. Position of Engines.
E E. Position of Boilers.
F. Balance Wheel.
G. Pumps.
Ground level 23 Ft. above water line of Canal.
Water line of Canal.
45 Feet.
Top water line of Canal.
Surface of River.
River Front of Engine House. 166 Feet long.
Ground level 23 Ft. above water line of Canal.
Water line of Canal.
Foundation.
Canal Front of Engine House. 166 long.

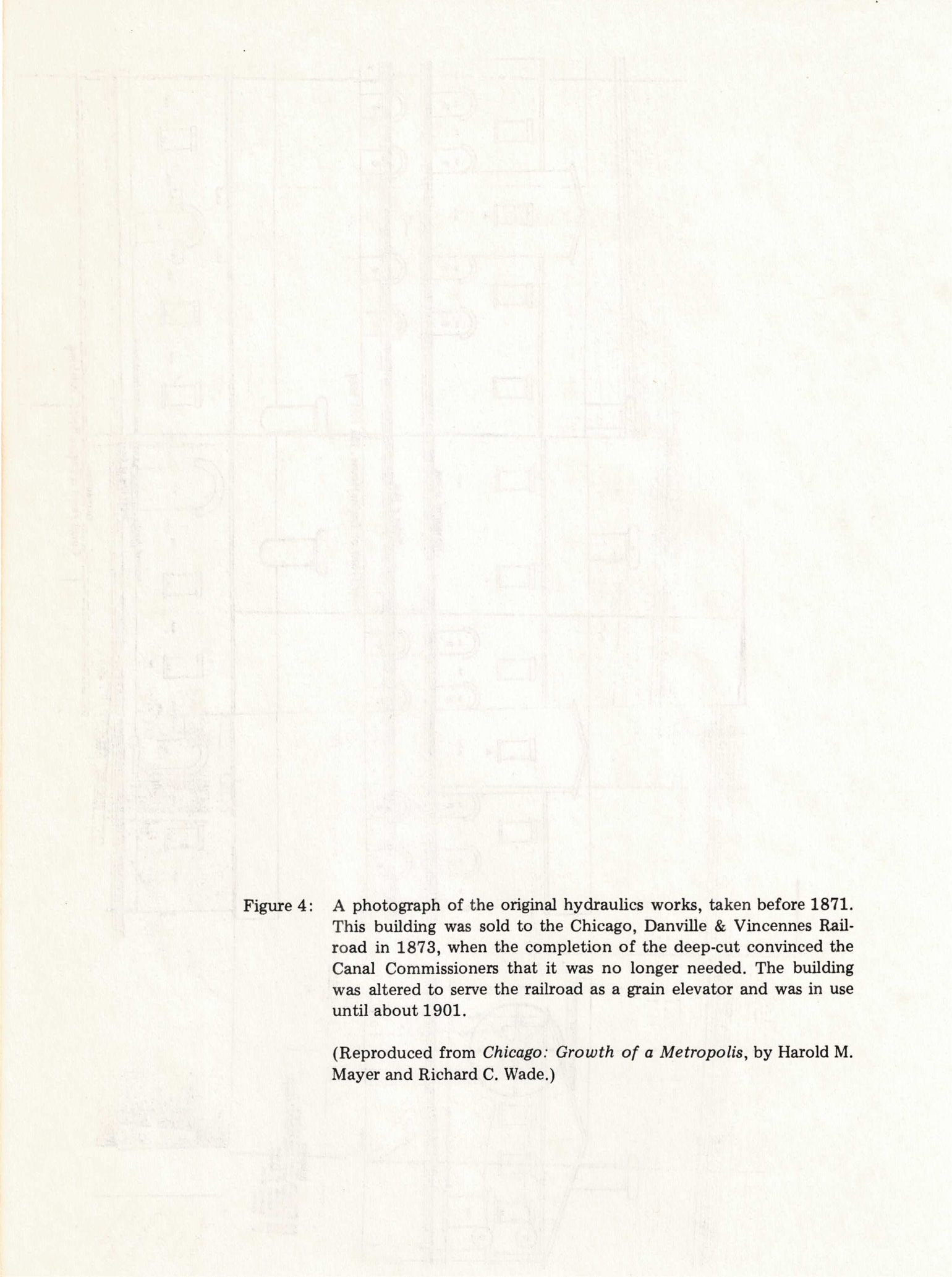


Figure 4: A photograph of the original hydraulics works, taken before 1871. This building was sold to the Chicago, Danville & Vincennes Railroad in 1873, when the completion of the deep-cut convinced the Canal Commissioners that it was no longer needed. The building was altered to serve the railroad as a grain elevator and was in use until about 1901.

(Reproduced from *Chicago: Growth of a Metropolis*, by Harold M. Mayer and Richard C. Wade.)

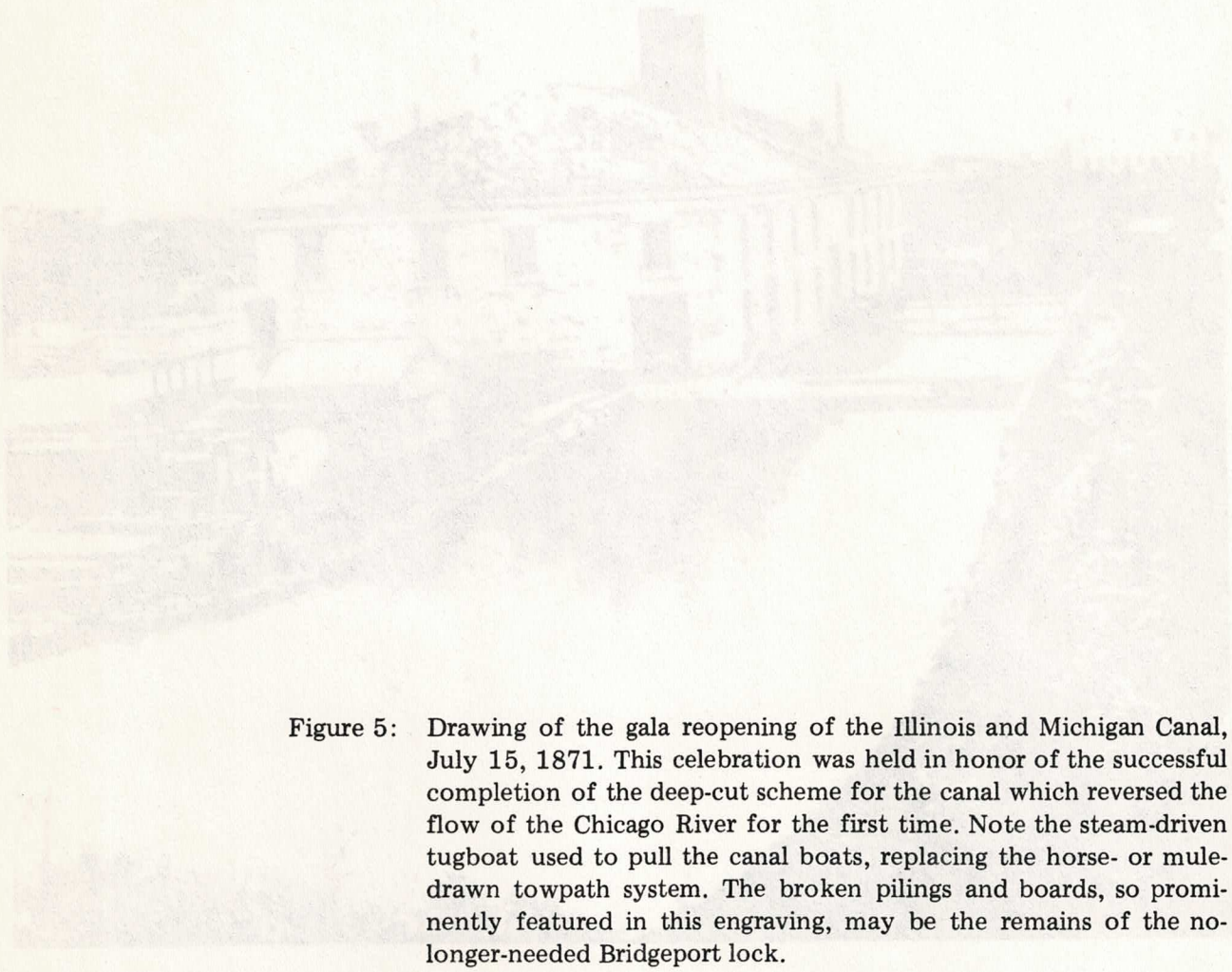


Figure 5: Drawing of the gala reopening of the Illinois and Michigan Canal, July 15, 1871. This celebration was held in honor of the successful completion of the deep-cut scheme for the canal which reversed the flow of the Chicago River for the first time. Note the steam-driven tugboat used to pull the canal boats, replacing the horse- or mule-drawn towpath system. The broken pilings and boards, so prominently featured in this engraving, may be the remains of the no-longer-needed Bridgeport lock.

(Engraving from *Leslie's Illustrated Newspaper*, August 26, 1871. Photograph courtesy of the Chicago Historical Society.)

CHICAGO, ILL.—THE OPENING OF THE NEW CANAL—INAUGURATION OF THE DEEP CUT WHICH ESTABLISHES A BACK CURRENT FROM LAKE MICHIGAN TO THE MISSISSIPPI RIVER.—FROM A PHOTOGRAPH BY SHAW.

Figure 6: Map of the origin of the canal, ca. 1885. The original hydraulic works is here labeled "Danville Elevator," and the new pumping station is indicated west of Ashland Avenue, where the supply channel was widened to accommodate two boiler houses and a "Pumping House." The bridge connecting Bridgeport and Fuller Street to the site at Levee Street is early indicated.

(Reproduced from a copy of a map in the Illinois and Michigan Canal Archives, courtesy of Lewis University.)

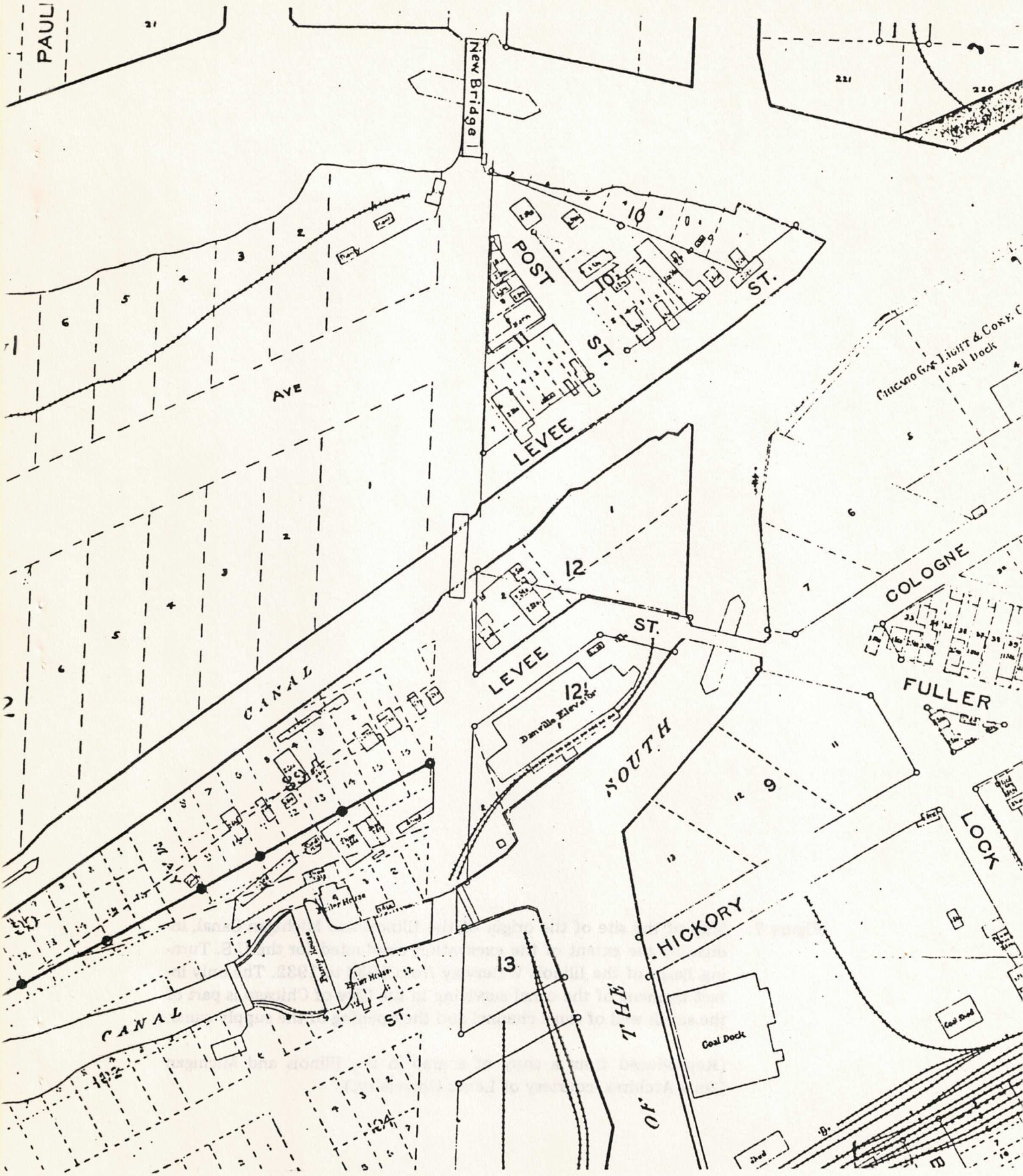

PAUL
New Bridge
POST
ST.
LEVEE
AVE
CANAL
12
ST.
LEVEE
12½
Danville Elevator
SOUTH
COLOGNE
FULLER
LOCK
HICKORY
13
CANAL
ST.
Coal Dock
Coal Dock

Figure 7: Map of the site of the origin of the Illinois and Michigan Canal, indicating the extent of the excavation conducted for the U.S. Turning Basin of the Illinois Waterway from 1930 to 1932. The only intact segment of the canal surviving in the City of Chicago is part of the south wall of canal channel and the opening of the supply canal.

(Reproduced from a copy of a map in the Illinois and Michigan Canal Archives, courtesy of Lewis University.)

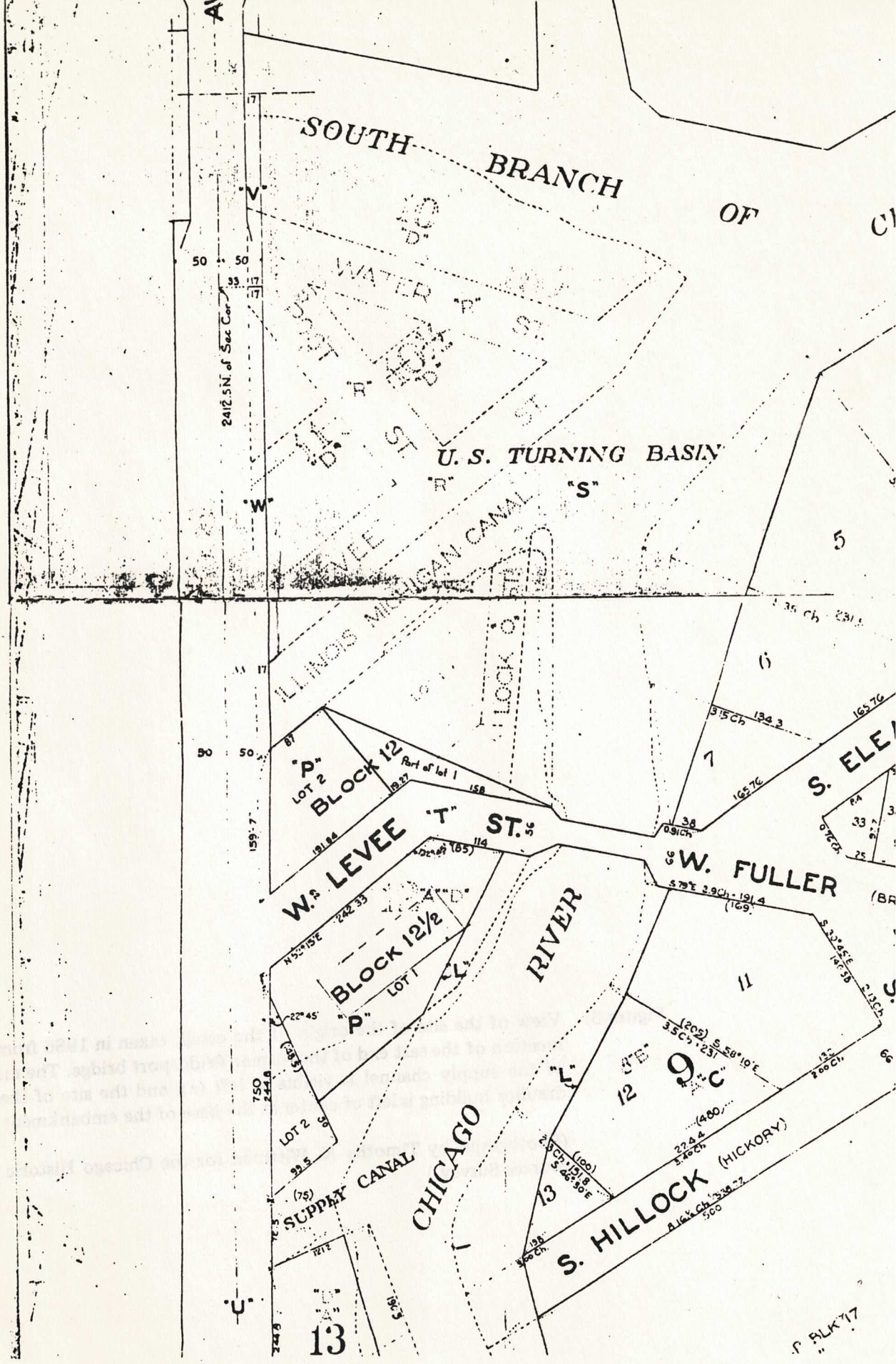

SOUTH BRANCH OF
WATER "R"
"D" ST.
"R"
U. S. TURNING BASIN
"S"
ILLINOIS MICHIGAN CANAL
LOCK "O"
"P" LOT 2 BLOCK 12
Part of lot 1
W. LEVEE "T" ST.
W. FULLER
BLOCK 12½
"P"
LOT 1
LOT 2
RIVER
CHICAGO
SUPPLY CANAL
S. HILLOCK (HICKORY)
2412.5 N. of Sec Cor
5
6
7
9
11
12
13
S. BLK 17

Figure 8: View of the site of the origin of the canal, taken in 1986 from the location of the east end of the former Bridgeport bridge. The mouth of the supply channel is visible at left (a), and the site of the hydraulics building is left of center at the base of the embankment (b).

(Photograph by Timothy N. Wittman for the Chicago Historic Resources Survey.)

a
b

Figure 9: Current map of the site of the origin of the Illinois and Michigan Canal. The proposed landmark boundaries include the mouth of the supply channel, the site of the original hydraulic works, the surviving fragment of the canal channel, the site of the Bridgeport bridge, and a parcel on the Fuller Avenue approach to the bridge.

(Reproduced from documentation collected by the Chicago Historic Resources Survey, Commission on Chicago Landmarks.)

N
SOUTH BRANCH OF CHICAGO RIVER
AV
TURNING BASIN
S ELEANOR
W LEVEE ST
W FULLER
BRANCH OF CHICAGO RIVER
LOCK
S. HILLOCK
ASHLAND
SOUTH FORK OF SOUTH
ADLAI E

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Additional research material used in the preparation of this report is on file at the office of the Commission on Chicago Landmarks and is available to the public.

The author would like to thank the Illinois and Michigan Canal Archives, the Archives Repository at Lewis University in Romeoville, Illinois, and Professor John Lamb for their assistance with the research materials for this project. Acknowledgement is also made to the Upper Illinois Valley Association and its Director of Programs, Roberta B. Deering, for additional information on the Illinois and Michigan Canal National Heritage Corridor.

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The Commission on Chicago Landmarks was established in 1968 by city ordinance, and was given the responsibility of recommending to the City Council that specific landmarks be preserved and protected by law. The ordinance states that the Commission, whose nine members are appointed by the Mayor, can recommend any area, building, structure, work of art, or other object that has sufficient historical, community, or aesthetic value. Once the City Council acts on the Commission's recommendation and designates a Chicago Landmark, the ordinance provides for the preservation, protection, enhancement, rehabilitation, and perpetuation of that landmark. The Commission assists by carefully reviewing all applications for building permits pertaining to the designated Chicago Landmarks. This insures that any proposed alteration does not detract from the qualities that caused the landmark to be designated.

The Commission makes its recommendations to the City Council only after extensive study. This preliminary summary of information has been prepared by the Commission staff and was submitted to the Commission when it initiated consideration of the historical and architectural qualities of this potential landmark.

CITY OF CHICAGO

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